REMARKS/ARGUMENTS

I. Introduction:

Claims 1, 19, 21, and 22 are amended herein. Claims 1-24 and 26-36 are currently pending. Reconsideration of the rejections in the Office Action dated June 2, 2005 is respectfully requested.

II. Claim Rejections Under 35 U.S.C. 103:

Claims 1, 2, 4, 6-13, and 19-21 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,631,136 (Chowdhury et al.) in view of U.S. Patent No. 5,581,543 (Natarajan).

Claim 1 is directed to a method for determining route redistribution at a device within a network. The method includes receiving an information packet from a neighbor source, the information packet identifying the source as a stub router and specifying route types that the source will advertise. Upon receiving notice of a failed link within the network, query packets requesting route information are sent only to neighboring devices that have not been identified as stub routers. Claim 1 has been amended to clarify that the stub router is identified as a router to which query generation is suppressed.

Chowdhury et al. disclose methods and apparatus for data communication using a hybrid transport switching protocol. The system re-routes data in the event of network alterations and determines an efficient way to transport data based on the then-existing network structure using link-state and distance vector techniques. As shown in Fig. 2, the network is broken into a global backbone region, a sub-backbone region, and stub regions. The stub regions represent a logical grouping of branch nodes. During operation, distance information is used to compute the best path to any particular node. Routing updates are periodically sent to every adjacent node. Also, every node sends a database update every 30 seconds to all of its neighbors. The routers use Hello Protocol

to send a periodic hello to all of its neighbors while listening for a hello from each neighbor. Hello messages include information such as the link cost advertised by the neighbor, node type, and region type.

Chowdhury et al. do not show or suggest receiving an information packet identifying the source as a stub router to which query generation is suppressed. Chowdhury et al. simply use conventional link-state algorithms to evaluate connections and update network changes. Each neighbor sends updates to every adjacent node and queries all of its neighbor nodes for updates. There is no suppression of query generation to routers identified as stub routers. Also, Chowdhury et al. do not disclose a stub router that specifies the route types that it will advertise. The Examiner states that Chowdhury et al. use a hello message which identifies advertised routes. This is not the same thing as identifying the specific route types that a router will advertise.

Furthermore, as noted by the Examiner, Chowdhury et al. do not disclose sending query packets requesting route information only to neighboring devices that have not been identified as stub routers. With respect to this limitation, the Examiner cites Natarajan.

The Natarajan patent is directed to a communication network and method which respond to a failed link. The network includes a number of switching nodes and a route-determining node. The network includes a gateway which couples to any number of telephonic devices. The route-determining node may also operate as a gateway or a gateway may operate as a route-determining node. Gateways 22, subscriber units 26, and route-determining nodes 28 use RF communications to communicate with one another through a constellation 30 of switching nodes. The route data that is defined by the route-determining node includes routes to the gateways, subscriber units, and switching nodes. Thus, route information is obtained and updated for all of these nodes. The route-determining node defines a priority routing for the entire network. When a link fails, the switching nodes terminating the link implement an interim rerouting procedure. The route-determining node then updates the routing definitions. Shortest

path routes for nodes isolated by the link failure are revised to omit the failed link and shortest path routes for non-isolated nodes and in route trees which do not include the failed link are not changed. Natarajan does not show or suggest sending query packets requesting route information only to neighboring devices that have not been identified as stub routers. Query information is sent to all nodes (including all neighboring devices) to determine if there is a failed link. If a failed link message is detected, the route-determining node generates updated routing data. There are no stub routers, which identify themselves as stub routers to the route-determining node, or do not receive query packets requesting routing information. In rejecting claim 1, the Examiner refers to gateway 22 as a stub router. However, this is not a router that specifies route types that it will advertise or identifies itself as a router to which query generation is suppressed, as set forth in claim 1.

Applicant's invention is particularly advantageous in that it provides a reduction in router traffic to stub nodes and processing load for central nodes, thus, permitting faster route convergence and greater scalability for networks with a large number of remote routers. Neither Chowdhury et al. nor Natarajan, either alone or in combination, show or suggest a stub router that specifies route types that it will advertise and does not receive query packets requesting route information, when notice of a failed link is received and query packets are sent out to neighboring devices, as set forth in claim 1.

Accordingly, claim 1 is submitted as patentable over Chowdhury et al., Natarajan, and the other art of record.

Claims 2-13, depending either directly or indirectly from claim 1, are submitted as patentable for the same reasons as claim 1.

Claim 19 is directed to a computer program product for determining route redistribution and claim 21 is directed to a computer system for determining route redistribution. Claims 19 and 21 are submitted as patentable for the reasons discussed above with respect to claim 1. Claim 20, depending from claim 19, is submitted as patentable for the same reasons as claim 1.

Claim 14 is directed to a method for reducing query generation for route redistribution within a network. The method includes receiving information at a router identifying the router as a stub router, sending an information packet from the stub router to neighboring devices, and upon receiving a query for route information other than the type specified in the information packet, sending a response packet with routes identified as inaccessible. The information packet identifies the source as a stub router and specifies route types that the stub router will advertise.

As previously discussed, neither Chowdhury et al. nor Natarajan show or suggest sending a response packet with routes identified as inaccessible or that specifies route types that a stub router will advertise.

Accordingly, claim 14 is submitted as patentable over Chowdhury et al., Natarajan, and the other art of record.

Claims 15-18, depending directly from claim 14, are submitted as patentable for the same reasons as claim 14. Claims 22 and 24 are directed to a computer system and claim 23 is directed to a computer program for reducing query generation for route redistribution and are submitted as patentable for the same reasons as claim 14. Claims 31-36, depending directly from claim 22, are submitted as patentable for the same reasons as claim 22.

Claim 26 is directed to a computer-implemented method for route redistribution and includes receiving information at a router identifying the router as a stub router, and limiting the amount of route information sent by the stub router to a neighboring device in response to a query for route information. Limiting the amount of route information sent by the stub router includes limiting the route information to only connected routes.

In rejecting claim 26, the Examiner refers to step 116 of Fig. 9 of the Natarajan patent, which includes generating a shortest path definition that does not include failed links. Fig. 9 illustrates a process for generating revised routes. It does not address sending route information to other routers and does not limit any information sent to

routers. It simply excludes the failed link when generating a new shortest path route. Obviously, a failed link is not included within path calculations for new routes following a link failure. This in no way limits routing information sent to neighboring nodes. The revised routes are stored in a routing table and the same routing table is sent to all neighbor nodes.

Accordingly, claim 26 is submitted as patentable over Chowdhury et al. and Natarajan. Claims 27, 28, 29, and 30 are also submitted as patentable for the reasons discussed above with respect to claim 26.

IV. Conclusion:

For the foregoing reasons, Applicant believes that all of the pending claims are in condition for allowance and should be passed to issue. If the Examiner feels that a telephone conference would in any way expedite the prosecution of the application, please do not hesitate to call the undersigned at (408) 446-8695.

Respectfully submitted,

Cindy S. Kaplan
Reg. No. 40,043

P.O. Box 2448
Tel: 408-399-5608
Fax: 408-399-5609